

## Claims

- [c1] ① A method for restricting travel of a moving contact in a lighting contactor, the lighting contactor including the moving contact and a contact carrier, said method comprising the steps of:
- providing a spacer;
  - providing a biasing member;
  - positioning the biasing member through the spacer; and
  - installing the biasing member and the spacer in the contact carrier.
- [c2] ② A method according to Claim 1 wherein said step of providing a spacer further comprises the step of:
- determining a compressed biasing member length; and
  - providing a spacer having a length substantial equal to said compressed biasing member length.
- [c3] ③ A method according to Claim 1 wherein the contact carrier defines an access slot, said step of providing a spacer further comprises the step of:
- determining a moving contact safe travel distance; and
  - providing a spacer sized to be received in the access slot, the spacer engaging the moving contact when the moving contact moves the safe travel distance.
- [c4] ④ A method according to Claim 1 wherein said step of installing the biasing member further comprises the step of engaging the biasing member to the moving contact.
- [c5] ⑤ A method according to Claim 1 wherein said step of installing the biasing member further comprises the step of mounting the biasing member with the contact carrier.
- [c6] ⑥ A method according to Claim 1 wherein said step of installing the biasing member further comprises the step of aligning a substantially planar proximate end of the spacer substantially parallel to a back of the moving contact.
- [c7] ⑦ A method according to Claim 6 wherein said step of aligning the spacer further comprises the step of aligning the spacer to engage the moving contact back upon rearward axial movement of the moving contact relative to a front wall and a rear wall of the contact carrier and a centerline axis of the lighting contactor.

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- [c8] 8 A lighting contactor comprising:
  - a contact carrier;
  - a moving contact extending through said contact carrier;
  - a biasing member housed in said contact carrier, said biasing member biasing said moving contact; and
  - a spacer, said biasing member extending through said spacer, said spacer limiting travel of said moving contact within said contact carrier.
- [c9] 9 A lighting contactor according to Claim 8 wherein said lighting contactor comprises a second moving contact extending through said contact carrier, a second biasing member housed in said contact carrier, and a second spacer, said second biasing member biasing said second moving contact and extending through said second spacer, said second spacer configured to limit travel of said moving contact within said contact carrier.
- [c10] 10 A lighting contactor according to Claim 8 wherein said spacer comprises a tube.
- [c11] 11 A lighting contactor according to Claim 8 wherein said lighting contactor comprises a centerline axis, said moving contact extending substantially perpendicular relative to said centerline axis.
- [c12] 12 A lighting contactor according to Claim 11 wherein said spacer comprises a proximate end, said moving contactor comprises a front and a back, said proximate end substantially parallel to said back.
- [c13] 13 A lighting contactor according to Claim 12 wherein said moving contact is substantially perpendicular to said centerline axis when said moving contact back abuts said spacer proximate end.
- [c14] 14 A lighting contactor according to Claim 13 wherein said moving contact comprises a first end and a second end, said biasing member contacting said moving contact back substantially equidistant from said first end and said second end.
- [c15] 15 A lighting contactor according to Claim 8 wherein said moving contact comprises a retaining boss, said biasing member engaged with said retaining boss.
- [c16] 16 A lighting contactor according to Claim 8 wherein said spacer comprises stainless steel.

- [c17] 17 A lighting contactor according to Claim 8 wherein said contact carrier defines an access slot that receives said moving contact, said biasing member, and said spacer.
- [c18] 18 A lighting contactor according to Claim 8 wherein said biasing member comprises a coil spring.
- [c19] 19 A lighting contactor according to Claim 8 wherein said spacer comprises a solid distal end, said biasing member extending from said solid distal end through said spacer.
- [c20] 20 A lighting contactor comprising:  
a contact carrier comprising an access slot and a centerline axis;  
a moving contact comprising a front, a back, a first end, a second end, and a retaining boss on said back substantially midway between said first end and said second end, said moving contact extending substantially perpendicular to said centerline axis through said contact carrier;  
a spring within said contact carrier, said spring engaging said moving contact retaining boss, said spring biasing said moving contact; and  
a stainless steel spacer, said spring extending through said spacer, said spacer comprising a proximate end substantially parallel to said back, said spacer limiting travel of said moving contact within said contact carrier.
- [c21] 21 A contactor block assembly comprising:  
a block case;  
a plurality of fixed contacts;  
a plurality of terminal connections; and  
a lighting contactor comprising:  
a contact carrier;  
at least one moving contact extending through said contact carrier;  
at least one biasing member housed in said contact carrier, one of said biasing members biasing one of said moving contacts; and  
at least one spacer, one of said biasing members extending through each said spacer, each said spacer configured to limit travel of at least one of said moving contacts within said contact carrier.

- [c22] 22 A contactor block assembly according to Claim 21 wherein said spacer comprises a tube.

- [c23] A contactor block assembly according to Claim 21 wherein said lighting contactor comprises a centerline axis, said moving contact extending substantially perpendicular from said centerline axis.
- [c24] A contactor block assembly according to Claim 23 wherein said spacer comprises a proximate end, said moving contactor comprises a front and a back, said proximate end substantially parallel to said back.
- [c25] A contactor block assembly according to Claim 24 wherein said moving contact is substantially perpendicular to said centerline axis when said moving contact back abuts said spacer proximate end.
- [c26] A contactor block assembly according to Claim 25 wherein said moving contact comprises a first end and a second end, said biasing member contacting said moving contact back substantially equidistant from said first end and said second end.
- [c27] A contactor block assembly according to Claim 21 wherein said moving contact comprises a retaining boss, said biasing member engaging said retaining boss.
- [c28] A contactor block assembly according to Claim 21 wherein said spacer comprises stainless steel.
- [c29] A contactor block assembly according to Claim 21 wherein said contact carrier defines an access slot, said access slot receiving said moving contact, said biasing member and said spacer.
- [c30] A contactor block assembly according to Claim 21 wherein said biasing member comprises a coil spring.
- [c31] A contactor block assembly according to Claim 21 wherein said spacer comprises a solid distal end, said biasing member extending from said solid distal end through said spacer.